tube.

3

What is Claimed:

1	1. A boule for use in fabricating microchannel plates, the boule		
2	including:		
3	a hollow glass tube formed of non-etchable glass having a plurality of flat		
4	inner surfaces, each surface is generally planar and extends generally parallel to		
5	the longitudinal axis of the tube.		
1	2. The boule of claim 1 further including:		
2	a plurality of optical fibers, each said optical fibers having a cladding layer		
3	formed of a non-etchable material and a core formed of etchable material, and a		
4	plurality of support rods formed of non-etchable material located between the flat		
5	inner surfaces and the optical fibers.		
1	3. The boule of claim 1 wherein the packing tube has at least 8 flat		
2	inner surfaces.		
1	4. The boule of claim 1 wherein the packing tube has 12 flat surfaces.		
ı	5. The boule of claim 1 wherein the width of the flat surfaces vary.		
1	6. The boule of claim 1 wherein the width of each of a first plurality		
2	of flat surfaces has a first dimension and the width of each of a second plurality of		
3	flat surfaces has a second dimension different than the first dimension.		
1	7. A boule in accordance with claim 6 wherein the first dimension is		
2	smaller than the second dimension.		
1	8. The boule of claim 2 wherein the fibers, rods and packing tube are		
2	fused together.		
1	9. The boule of claim 2 wherein the support rods have a cross-		
2	sectional shape including a flat surface for engaging the flat inner surfaces of the		

_	1	U.	A microchannel plate formed from the boule of claim 8.	
1	1	1.	A method of forming a microchannel plate, said method	
2	comprisi	ng the	e steps of:	
3	р	rovidi	ng a bundle of fibers wherein, each fiber has an etchable core	
4	surround	led by	a non-etchable cladding;	
5	р	acking	g a plurality of said bundles into a hollow packing tube formed of	
6	non-etch	able n	naterial and which has a plurality of flat inner surfaces;	
7	р	ositio	ning a plurality of support rods between said fibers and said flat	
3	inner surface to form a packed boule; and			
)	fi	using	the fibers, packing tube and support rods.	
1	1	2.	The method of claim 11 wherein the glass tube has at least 8 flat	
2	surfaces.			
1	1	3.	The method of claim 11 wherein the glass tube has 12 flat surfaces.	
1	1	4.	The method of claim 11 wherein the width of the flat surfaces	
2	vary.			
1	1	5.	The method of claim 11 wherein the width of each a first plurality	
2	of flat su	ırfaces	has a first dimension and the width of each of a second plurality of	
3	flat surfa	ices ha	as a second dimension different then the first dimension.	
1	1	6.	The method of claim 15 wherein the first dimension is small than	
2	the secon	nd din	nension.	
1	1	7.	The method of claim 11 wherein the support rods have a cross-	
2	sectional	l shape	e including a flat surface and wherein at least some of the flat	
3	surfaces of the support rods engage the flat inner surfaces of the tube.			
1	1	8.	The microchannel plate formed by the method claim 11.	